



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,117	02/11/2004	Ju-Byung Lee	678-1160 (P11007)	2811

28249 7590 12/22/2006  
DILWORTH & BARRESE, LLP  
333 EARLE OVINGTON BLVD.  
UNIONDALE, NY 11553

EXAMINER
----------

SOBUTKA, PHILIP

ART UNIT	PAPER NUMBER
----------	--------------

2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/22/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/776,117

Applicant(s)

LEE, JU-BYUNG

Examiner

Philip J. Sobutka

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 is/are allowed.
- 6) ☒ Claim(s) 1-5,8-10,12,13 is/are rejected.
- 7) ☐ Claim(s) 6,7 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5,8-10,12,13 are rejected under 35 U.S.C. 102(e) as being \*\*\* by Myllymaki et al (US 6,018,646) in view of Miyazaki (US 5,081,713).

Consider claim 1. Myllymaki teaches a method for controlling SAR (Specific Absorption Rate) in a mobile terminal for controlling a transmission power of an RF (Radio Frequency) signal by controlling a gain of an amplifier for amplifying the RF signal (*Myllymaki see column 4, lines 18-25*), comprising the steps of:

a) checking a user-selected SAR control mode of the mobile terminal (*Myllymaki teaches the user setting limits in column 3, lines 30-30, column 4, line 55 – column 5, line 5*);

b) setting a code value corresponding to a transmission power of the RF signal, wherein the code value is set to a first code value when the user-selected SAR control mode is a safe mode, and is set to a second code value when the user-selected SAR control mode is a normal mode (*Myllymaki teaches controlling transmit power based on*

Art Unit: 2618

*user set limits which would correspond to the claimed "code value" for example in column 4, lines 18-35. Note that if the user chose to set a minimum level, that would correspond to the claimed "safe mode" while if the user chose to set it higher that would correspond to the claimed "normal mode"); and*

Myllymaki lacks a teaching of controlling transmission power by controlling the gain of the amplifier.

It is notoriously well known in the art to control output power by controlling amplifier gain. Miyazaki teaches one arrangement for controlling output power by controlling amplifier gain (*Miyazaki see figure 1*). It would have been obvious to one of ordinary skill in the art to modify Myllymaki to control output power by controlling amplifier gain in order to utilize a proven arrangement such as Miyazaki's.

As to claim 2, Myllymaki in view of Miyazaki teaches the method as set forth in claim 1, wherein the amplifier is a drive amplifier (*note that the gain controlled amplifier of Miyazaki is a drive amplifier, meaning it is before the power amplifier as shown in Miyazaki's figure 1*).

As to claim 3, Myllymaki in view of Miyazaki teaches the method as set forth in claim 1, wherein the first code value is lower than the second code value when the RF signal is transmitted with a high transmission power (*Myllymaki teaches controlling transmit power based on user set limits which would correspond to the claimed "code values" for example in column 4, lines 18-35. Note that if the user chose to set a minimum level, that would correspond to the claimed "safe mode" while if the user*

Art Unit: 2618

*chose to set it higher that would correspond to the claimed "normal mode" "second code value", thus the first code would be lower than the normal.).*

As to claim 4, Myllymaki in view of Miyazaki teach the method as set forth in claim 3, wherein the first code value is equal to the second code value when the RF signal is transmitted with a low transmission power (*Myllymaki teaches controlling transmit power based on user set limits which would correspond to the claimed "code value" for example in column 4, lines 18-35. Note that if the user chose to set a minimum level, that would correspond to the claimed "safe mode" while if the user chose to set it higher that would correspond to the claimed "normal mode", note also that if the output power would not be exceeding the limit it would be in a condition where the normal mode was equal to the minimum safe mode, which would be a function of circumstances.).*

As to claim 5, Myllymaki in view of Miyazaki teach the method of claim 1, wherein the code value is selected from code tables wherein individual transmission powers and individual codes are interconnected with each other (*Myllymaki teaches controlling transmit power based on user set limits which would correspond to the claimed "code values" for example in column 4, lines 18-35. Of course the limits are "interconnected with a transmit power).*

Consider claim 8. A method for controlling SAR (Specific Absorption Rate) in a mobile terminal for controlling a transmission power of an RF (Radio Frequency) signal

Art Unit: 2618

by controlling a gain of an amplifier for amplifying the RF signal (*Myllymaki* see column 4, lines 18-25), comprising the steps of:

a) checking a user-selected SAR control mode of the mobile terminal (*Myllymaki* teaches the user setting limits in column 3, lines 30-30, column 4, line 55 – column 5, line 5);

b) if the RF signal is to be transmitted with a high transmission power and the SAR control mode is set to a safe mode, setting the transmit power to a prescribed level (*Myllymaki* teaches controlling transmit power based on user set limits which would correspond to the claimed “code value” for example in column 4, lines 18-35. Note that if the user chose to set a minimum level, that would correspond to the claimed “safe mode” while if the user chose to set it higher that would correspond to the claimed “normal mode”).

*Myllymaki* lacks a teaching of controlling transmission power by controlling the gain of the amplifier.

It is notoriously well known in the art to control output power by controlling amplifier gain. *Miyazaki* teaches one arrangement for controlling output power by controlling amplifier gain (*Miyazaki* see figure 1). It would have been obvious to one of ordinary skill in the art to modify *Myllymaki* to control output power by controlling amplifier gain in order to utilize a proven arrangement such as *Miyazaki*'s. As to the amplifier gain being controlled by attenuation level, it is notoriously well known in the art to control amp gain using an attenuator. It would have been obvious to one of ordinary

Art Unit: 2618

skill in the art to modify the arrangement of Myllymaki in view of Miyazaki to use attenuators to set the gain in order to utilize a proven arrangement for controlling gain.

As to claim 9, Myllymaki in view of Miyazaki teach the method as set forth in claim 8, further comprising the step of setting the gain of the amplifier to a prescribed normal gain if the SAR control mode is a normal mode (*Myllymaki teaches controlling transmit power based on user set limits which would correspond to the claimed "code values" for example in column 4, lines 18-35. Note that if the user chose to set a minimum level, that would correspond to the claimed "safe mode" while if the user chose to set it higher that would correspond to the claimed "normal mode" "second code value", thus the first code would be lower than the normal.*).

As to claim 10, Myllymaki in view of Miyazaki teach the method of claim 9, wherein the safe mode and the normal mode are selected from code tables wherein individual transmission powers and individual codes are interconnected with each other (*Myllymaki teaches controlling transmit power based on user set limits which would correspond to the claimed "code values" for example in column 4, lines 18-35. Of course the limits are "interconnected with a transmit power*).

As to claim 12, Myllymaki in view of Miyazaki teach the method as set forth in claim 8, wherein the mobile terminal provides a user with a user interface, enabling the user to select the SAR control mode power (*Note that Myllymaki teaches the user setting SAR exposure limits for example in column 3, lines 20-30, and column 4, lines 18-35 therefore Myllymaki would have to have a user interface*).

Art Unit: 2618

As to claim 13, Myllymaki in view of Miyazaki teach the method as set forth in claim 7, wherein the amplifier is a drive amplifier (*note that the gain controlled amplifier of Miyazaki is a drive amplifier, meaning it is before the power amplifier as shown in Miyazaki's figure 1*).

**Allowable Subject Matter**

3. Claim 14 is allowed.

Consider claim 14. The nearest prior art as shown in Myllymaki fails to teach a mobile communication terminal including an amplifier for amplifying and transmitting an RF (Radio Frequency) signal, comprising: a user interface for selecting a SAR (Specific Absorption Rate) control mode of the mobile terminal; a memory for storing program data for controlling the mobile terminal, and storing information of the SAR control mode and code tables of amplifier gains corresponding to individual SAR control modes; and a controller for setting a first code value of the memory indicating a gain of the amplifier when the SAR control mode is a safe mode, setting a second code value of the memory indicating a gain of the amplifier when the SAR control mode is a normal mode, and amplifying the RF signal according to the gain of the amplifier.

4. Claims 6,7,11, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 6. The nearest prior art as shown in Myllymaki fails to teach the method as set forth in claim 5, further comprising the steps of: d) calling a



Art Unit: 2618

corresponding code table according to the user-selected SAR control mode; and e) calculating a code value versus a transmission power to be transmitted on the basis of the called code table.

Consider claim 11. The nearest prior art as shown in Myllymaki fails to teach the method as set forth in claim 10, further comprising the steps of: d) calling a corresponding code table according to the checked SAR control mode; and e) calculating a code value versus a transmission power to be transmitted on the basis of the called code table, and setting the gain of the amplifier according to the code value.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lindell (US 5,524,275) has been cited to show another arrangement for limiting user exposure utilizing measures of power level over time.

Wiedeman et al (US 5,802,445) has been cited to show an arrangement for limiting user RF exposure. Note that Wiedeman specifically teaches away from the exposure limits being set in the mobile unit, see for example column 1, lines 25-35, therefore Wiedeman's limit setting and control are all done at the network gateway controller.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached Monday through Friday from 8:30 - 5:00.

Art Unit: 2618

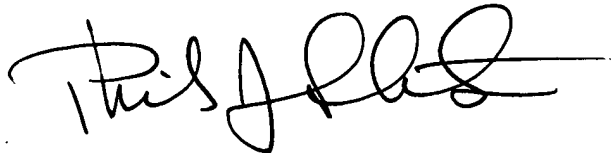
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4711.

7. The central fax phone number for the Office is 571-273-8300.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number.

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**PHILIP J. SOBUTKA**  
**PATENT EXAMINER**

Philip J Sobutka

(571) 272-7887